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ABSTRACT

Thirteen research reviews in this issue pertain to guidance and new careers organized under topics of: (1) Occupational Information, treating a career information service, a pilot computer-assisted guidance program, a junior high school program, and a study of information flow into secondary schools, (2) Careers, including a discussion of a national seminar on vocational guidance, a career development workshop, and a manual prepared for personnel developing a comparative guidance and placement program, (3) Research Reviews, discussing student selection and prediction of success, and guidance and counseling services, and (4) Student Interests and Experiences, reporting a student socioeconomic profile, vocational interests of nonprofessional women, techniques applied to maladjusted under-achievers, and career thresholds. "Plain Talk," a continuing column by the editor reports anticipated changes in future research reviews reflecting: (1) a teacher target audience, (2) problem-centered research, (3) a synthesis pointing out alternatives for action, (4) retention of the synthesis-application-dissemination theme, and (5) continued survey of the readership. A warning is voiced of the possibility of a dual-track system in vocational and general education in both the guidance and education functions. The bibliography lists 47 related studies and five document sources for further reading. (DM)

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RESEARCH VISIBILITY

SYNTHESIS / APPLICATION / DISSEMINATION

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Guidance and New Careers

page

TOPIC I: OCCUPATIONAL INFORMATION 43

Career Information Service
Pilot Computer-Assisted Guidance Program
Junior High Program
Information Flow Into Secondary Schools

TOPIC II: CAREERS 46

National Seminar on Vocational Guidance
Development Workshop
Comparative Guidance and Placement Program

TOPIC III: RESEARCH REVIEWS 48

Student Selection and Prediction of Success
Guidance and Counseling Services

TOPIC IV: STUDENT INTERESTS AND EXPERIENCES 50

Socioeconomic Profile
Nonprofessional Women
Techniques Applied to Maladjusted Under-Achievers
Career Thresholds

PLAIN TALK 53

BIBLIOGRAPHY 54

VT009979

PREFACE

"Whipping dead horses"

ADVOCATES of innovative research and guidance services self-inflict the "dead horse" criterion on some of their investigations. No doubt, the criticism is appropriate to many aspects of research in the social sciences, and it should not be regarded as a jurisdictional weakness of the guidance and counseling community. Possibly the lesson to draw is that there are too many *live* horses which should be whipped with new and bold approaches.

However distasteful the comparison, the parallels between research in guidance and counseling and research in vocational education are striking. Negative aspects of the comparison and the reasons which have produced the condition are both plausible and understandable. It is another way of expressing the wide gap between practitioners and theorists.

> The field of counseling has generally lacked a disciplined research tradition, and for understandable reasons. The service demands on counselors have often been so pressing that systematic investigation into the effectiveness and efficiency of processes and products has paradoxically been ignored. "We are too busy counseling to seriously question the consequences of what we do and how we do it."
>
> In addition, counseling, like kissing, is so intrinsically interesting and satisfying that few bother to critically examine it. The field's practitioner heritage, swamped with problems and demands, has not generally viewed "research" as an endeavor with much to offer. (Carl E. Thoresen in "Relevance and Research in Counseling." *Review of Educational Research*, April/1969, Vol. 39, No. 2, p. 264.)

There are other parallels.

H. B. Gelatt points these up in an interesting "personal commentary," totally without reference to vocational education. His propositions, based upon his personal experiences and a survey of three years of literature in the school guidance area, seem to have numerous applications to professional needs of vocationalists:

1. Nonprofessional support personnel are necessary.
2. Guidance goals and research must be related to the total educational system.
3. Guidance information research can contribute to guidance content.
4. Guidance research must directly involve students and guidance workers.
5. Guidance services and research must be innovative.

(In "School Guidance Programs." *Review of Educational Research.* April 1969, Vol. 39, No. 2, pp. 149-151.)

The search for a theoretical base. Current literature in guidance and counseling reflects considerable attention directed toward the development of theoretical bases. Obviously and most desirably, there is no single, accepted theory of guidance and counseling at the present time. This condition does make difficult the discovery of a functional role of guidance and counseling as they are related to the educational process in general and to vocational and technical education in particular.

Confusion is compounded as new terms become substituted for "vocational guidance," a term which in itself has never had acceptance and has suffered innumerable scars during the past half-century. Educational Testing Service's Martin R. Katz, in the April 1969 volume of *Review of Educational Research* and at the risk of over-simplification, indicates:

> In school settings, *counseling* (a process) may be regarded as a major element in *guidance* (a program), which in turn may be considered a component of *pupil personnel services* (an administrative designation about which no more will be said in this chapter.) By synecdoche, however, "counseling" has often stood for "guidance" in the literature. It seems defensible, therefore, in much of this chapter to treat the terms as over-lapping, if not interchangeable. Indeed, practitioners are called "guidance counselors" and "counselors" quite indiscriminately.
>
> However, it must be recognized that "counseling" is sometimes perceived to be more extensive than "guidance": it is occasionally found in the company of such modifiers as vocational, educational, academic, developmental, behavioral, adjustment, personal, social, ethical, and financial. These same adjectives are almost as frequently associated with "guidance," however, suggesting that the most pressing business is not to pit "counseling" and "guidance" against each other. Of greater concern is a distinctive definition of the territory that guidance and counseling jointly occupy in education.

Reference to previous issues of Research Visibility. Research and study of guidance and counseling have been treated in the past in these columns in the March and December, 1968, issues. Specifically, research related to vocational guidance was reported in March; December reporting focused its attention to the broader implications of vocational guidance and human resources. Hopefully, there has been no duplication of reporting as such; some research activities similar to those previously reported have continued, and other new ones have lately come over the horizon.

Other AVA publications. *Challenge of Guidance to Vocational Education* (12 pp., 1965, #101065, 25¢) and *Vocational Aspects of Guidance: A Statement of Policy of the AVA* (12 pp., 1968, #21368, 50¢) are available related reading.

Career Information Service

The Career Information Service: A Guide to Its Development and Use. Duncan F. Circle, et. al., Department of Education, Commonwealth of Massachusetts, Boston, May 1968.

This volume documents the Newton Public School system's career information and career guidance program offered to its students through three projects: (a) a Career Information Project to develop improved procedures for acquiring, processing and disseminating career information; (b) a Follow-Up Program to design and implement a system for conducting comprehensive follow-up studies of Newton students; (c) a job placement service.

In 1967-68, all three activities were coordinated in one Career Resource Center. This report describes the theoretical background of the services, briefly describes the projects and provides guidelines for the development of similar services for other school systems. A major bibliographic index of the materials which were assembled and used in the career resource center is also included.

Decisionmaking by the student in the process of career development is largely based on available information about work opportunities. Because of the multiplicity of occupations today the student must have guidance in understanding the choices available to him. The authors believe that the provision of information for self-evaluation in regard to career opportunities is not to be left to chance, but should be a continuing guidance service in the school structure.

Although there are various contributing factors to the de-emphasis of career guidance—the complexity, the idea that most "worth-while" students will attend college, and the attitude that values "personal adjustment" counseling more highly—the authors contend that the accessibility of occupational information is possibly one of the most crucial factors.

The first step in organizing this service was to survey the literature of Massachusetts school systems that had successful operating programs, and then to analyze the Newton school system, community resources and the student needs. After a determination of the need for a job placement service, members of the business community were contacted and a Community Advisory Committee was formed to work out the best possible way to contact employers. A steering committee of school personnel was formed which represented all school groups that would be interested in the program and the Division of Employment Security. This committee had the authority to approve or disapprove all operating plans for the collection and dissemination of job openings.

The central placement center's responsibility includes: obtaining accurate information verbally from employers; listing job openings and placing them on bulletin boards in the area schools; distributing job opening lists to employers who are on them and distributing evaluation forms for students to be interviewed by employers.

When a student is interested in a job opening he visits the job placement counselor who determines if he is qualified. If qualified and still interested after learning the name of the firm, the student is given an introduction card and an instruction sheet on job interview behavior. The student is then responsible for calling the employer and making an appointment for an interview. The employer is asked to return the introduction card and the interview evaluation form to the counselor who "closes" the vacancy if the student was hired.

One of the main problems was communication between the school and the employers. Less than half the employers notified the schools when a position was closed, and the center had to telephone the employers in order to maintain an up-to-date listing which would not cause the students to lose faith in the system as a result of receiving inaccurate information.

The Career Information Library is designed to act as a clearinghouse of available career information through several media which, because of their complexity, cannot be presented effectively by individual counselors.

Guidelines are presented for those considering the establishment of a new program or evaluating existing practices: basic references, descriptions of questions to be considered in developing a rationale for introducing such a service, and matters related to personnel, acquisition of materials, facilities required, and systems to be followed.

The Job Placement Service should be an integral part of the vocational decisionmaking process, functioning within the school setting. One of the primary purposes of this project was to formalize vocational placement as a service provided by the school to all students.

Because time, place, money and personnel variables are so great, each school will have to devise a method suitable for it in planning a job placement service. Included in this section are some general guidelines for the development of job placement services.

The Follow-Up Service is necessary in order to gain an understanding of students in the context of their career development, and information so obtained should be used to provide indicators to students about areas to explore. For example, information should show popular occupations, those not frequently entered, employment areas new to the student, etc. This section presents a guide to be used in performing a follow-up study and also describes the Newton Follow-Up Program, including documentation of procedures developed in Newton.

The Career Guidance Resource Center was formed just prior to the writing of this document by the consolidation of the Career Information Library and the Jobs for Youth Placement Service as part of the guidance program of Newton High School. One of the guidance services provided by the professional staff is consultation with students, most of whom have been referred by the school counselors.

Teachers and classes visit the displays and use the materials avail-

able. Career assemblies and conferences are presented in the school, and speakers are brought in from the community. A vocational testing service is provided. Ideally, the center should also provide inservice training in career development for school faculty. The possibilities for a center of this nature are limitless, and a flexible adaptation is possible for all types of schools.

Pilot Computer-Assisted Guidance Program

The Development and Evaluation of a Pilot Computer-Assisted Occupational Guidance Program. Joseph T. Impellitteri. Pennsylvania Department of Public Instruction, Harrisburg, Pa. July 31, 1968.

The Computer-Assisted Career Exploration System was developed to: (a) provide "an easily updated individualized occupational information retrieval system," (b) develop "a process whereby youth could develop their own individualized frameworks of the occupational structure" and (c) provide "an experience for youth to acquire, by simulated practice, operational strategies in relating their abilities and interests to occupational opportunities."

The system consists of a terminal, at which the student is seated, consisting of a computer-controlled, typewriter-like device, tape recorder and slide projector. The terminal is connected to an IBM 1401 computer, which houses information about the student and various occupational functions and requirements.

The system works as follows. The student receives orientation on the purpose of the system and is given a list of 40 occupations with corresponding codes. When he is seated at the terminal, the computer requests that he select one of these occupations for further exploration. The student responds by typing out a code number, and he receives from the computer a typed-out short paragraph describing the occupation.

The computer then asks whether the student, on the basis of the information he has received, wishes to learn more about the occupation. If he does, the computer begins a series of four operations giving further illumination to the occupation. First, it types out a list of any discrepancies between the student's "ability-preference profile" and the requirements of the occupation. Then it plays a two-minute taped interview with a worker in the occupation, after which a picture of a worker performing tasks of the occupation is shown by the slide projector. Finally, a 150 to 200-word description of the occupation, which the student may keep for later reference, is typed out by the computer.

The guidance sessions last 40 minutes each, and in this period of time the student may explore as many occupations as he desires or has time for. At any point he may request that the computer select for him occupations for which he is best suited, according to the personal information which the computer has for him. The student is permitted to use as many 40-minute sessions as he wishes.

The system was field tested at two junior high schools in Pennsylvania. The first test was conducted with 72 ninth grade boys who were planning to take a vocational or technical course when they entered senior high school. Through this field trial, three basic faults were found with the system. These were generally alleviated through changes in the computer system before the second field trial was conducted. The second trial was conducted upon 140 ninth grade boys who also indicated a desire to enter a course of vocational or technical training the following year. Some of the findings of this second field trial were that:

- The average number of sessions for which the boys used the system was five.
- An average of 16 occupations was investigated by each boy.
- Sixty-five percent of the boys asked the computer to select occupations for them to pursue further.
- In general, the boys sought out additional occupational information on their own.
- The most helpful aspect of the system appeared to be the typed descriptions of the occupations which could be kept for future reference, and the least helpful were the slides.

After they had completed their sessions with the system, the boys were surveyed for their reactions to the system and any changes which they thought should be made in it. Among their suggestions for changes in content of the sessions were those which asked for more choices of occupational descriptions, more information on each occupation, and interviews with more than one worker in each occupation. It was also suggested that explanatory comments accompany slides. The boys felt that more orientation to use of the system was needed and that sessions should last more than 40 minutes.

In forming conclusions and making recommendations regarding the study, it was necessary for the investigator to distinguish between the sources from which he received evaluatory information. Some of this information was collected through interviews and a written reaction inventory from the boys. Results of these evaluatory instruments would tend to be misleading, as they represent only students' self-perceptions.

A different interpretation was obtained from "directly observed phenomena" such as comparisons of occupational choices before and after participation in the program, the number of boys who sought additional occupational information on their own, and the ability of the boys to explain a strategy for investigating occupations without the help of a computer.

In general, it was concluded that the boys did like the terminal experience. They liked the private nature of the interaction, but in at least half of the cases expressed a wish that opportunities to discuss problems were available. It is therefore suggested that perhaps "some ideal mix of terminal experience and counselor involvement in the total process" should be attempted.

Findings indicated that the increased knowledge of the boys in regard to occupational opportunities was not reflected in their choices of tenth-grade courses of study. This fact indicates that guidance should go further than just occupational information at this level—it must be placed in a useful framework. The inability of the boys to utilize the occupational information which they received places "some doubt on the effectiveness of the Computer-Assisted Career Exploration System."

It was concluded that, although the students perceived the system to

be useful and enjoyable, it did not promote observable changes in their occupation-seeking behavior or attitudes. A revised system will be used in tests in the winter of 1969, and the investigators hope that by this time there will be other computerized guidance systems in operation against which the results may be compared.

Junior High Program

Occupational Information in the Junior High School: Implications for Vocational Education. Richard R. DeBlassie and W. Paul Jones. New Mexico Research Coordinating Unit, Santa Fe.

This report presents the procedures, results and implications of a survey of the availability and use of occupational materials in the junior high schools of New Mexico. Occupational materials relating to vocational education were a major focus of the study.

The survey was conducted by means of a questionnaire containing questions concerned with (a) availability of occupational information, (b) extent of use by professional staff and students, (c) sources of material, (d) percentage of materials relevant for vocational education, (e) appropriateness of reading level, and (f) factors which may be limiting the use of occupational materials.

Results of the survey indicated that a high percentage of respondents had access to a file of occupational information in their schools, with a majority of both professional staff and students using these materials at least occasionally. The largest source of materials was printed kits and free materials, and the majority of the respondents felt that over half of the materials available related to vocational occupations. Most of the respondents felt that the reading level of the materials was appropriate for their students. Factors limiting the use of materials were inaccessibility or inappropriateness of materials, or lack of integration of materials.

The following recommendations resulted from the study:

1. Counselors should aid teachers in developing methods for incorporating occupational information into the curriculum.
2. Counselors and teachers using occupational information at the junior high school level should evaluate such information prior to presenting it to pupils.
3. Counselors and teachers using occupational information at the junior high school level should periodically evaluate and bring their occupational information files up to date.
4. Counselors and teachers should be encouraged to include more occupational information dealing with careers not requiring a degree.

Information Flow Into Secondary Schools

Determine the Feasibility of Developing a Model Describing the Flow of Occupational and Economic Information Into the Secondary Vocational-Technical School. Leonard C. Silvern. Education and Training Consultants Co., Los Angeles, Calif. June 1967.

The objectives of this study were to determine the feasibility of synthesizing a model describing the flow of occupational and economic information into the secondary vocational-technical and comprehensive school from outside the school or school district. The original model would be built on the experience of the investigator and others knowledgeable in the field, and then would be synthesized into a new model based on analysis and evaluation of the original model. The evaluation, along with implications and recommendations, of the new model are published in this report.

An examination is made of system conceptualization from 1914 to 1964, and recent developments in systems analysis and synthesis for education are outlined and evaluated. The term "feedback" is defined for purposes of the study.

Information for development of the model was obtained from occupational teachers, supervisors of occupational instruction and directors of vocational education (or the equivalent), state departments of education (including bureau chiefs, division heads, regional supervisors, regional technical personnel, and university staff), university faculty not affiliated with a state department of education function, county departments of education having occupational education functions, occupational counselors in secondary schools and school districts, training directors in government agencies and private business, officers of professional societies, twelfth grade students, recently graduated students, and experts in school-industry relationships.

Samples were taken primarily from the fields of radio and television electronics, machine drafting and design, and commercial art.

A flowchart model is presented in the report, and 49 closed-loop signal paths for feedback are described, evaluated and related to occupational instructor performance. The model is described by the study as having these characteristics:

1. It is a high-fidelity analog of real-life.
2. It is a cybernetic model, showing interaction with a real-life environment.
3. It is closed-loop with a large number of feedback signal paths, extrinsic and intrinsic to the school or school district.
4. It is a general model of secondary schools and of occupational teachers in those schools.
5. It has closed-loop feedback paths each of which is identifiable in terms of up to five characteristics.
6. It appears possible to measure the value of each feedback loop in crude units.
7. It makes instructor performance a related function.

The approach used in the study was concluded to be feasible and can also be extended to other problem areas. It is felt that models can be developed which will have an immediate, practical application.

The appendix to the study presents a paper by Leonard Nadler, "How New Content Elements Enter into Vocational Courses, in Actual Practice."

Bound volumes of *Research Visibility* are available. Vol. I (1967-1968) is priced at $1.25; Vol. II (1968-1969) is $1.50. Both volumes may be ordered at a special rate of $2.50. Discount of 10 percent is given for orders of 10 or more. Send orders to AVA, 1510 H St., N.W., Washington, D.C. 20005.

National Seminar on Vocational Guidance

National Seminar on Vocational Guidance, August 21-26, 1966, Northern Michigan University, Marquette, Mich. Final Report. John G. Odgers. American Vocational Association and American Personnel and Guidance Association, Washington, D.C. September 1968.

The major objective of this seminar was "the achievement of more adequate vocational guidance services in the nation's schools through the improvement of state supervisory services." The seminar included keynote addresses by national leaders in vocational education and guidance, discussion panels (state directors of vocational education, national leaders from business, industry, labor, and the U.S. Employment Service), demonstrations, small group discussions, work groups, individual consultation, and opportunity for independent study and the use of seminar resource files.

State departments of education contributed vocational guidance materials for distribution to seminar participants. These included handbooks, manuals, bibliographies, course or conference outlines, project descriptions and other publications.

Seven work groups tackled each of the following topics:

1. To develop program proposals for the orientation of students to vocational education opportunities and requirements, and to develop improved group procedures related to vocational planning, course choice, and economic education.
2. To analyze types of vocational, educational and economic information available and needed, and to recommend approaches to meeting identified needs at both the elementary and secondary level.
3. To relate testing services to vocational guidance and course selection and to develop proposals for vocational course selection techniques.
4. To seek consensus on basic principles regarding school programs of vocational guidance and to develop program recommendations for upgrading counselor competencies in educational and vocational guidance.
5. To increase competencies in establishing and maintaining state supervisory relationships and channels of communication with local schools.
6. To determine needs related to the preparation of counselors for the educational and vocational aspects of the guidance program and to study and determine specific methods by which state guidance personnel and counselor educators may cooperate in preservice and inservice education.
7. To share methods and techniques for community or area occupational surveys, student interest surveys, and other studies related to the establishment of vocational courses or area vocational schools.

Guidance needs which work groups and participants voiced during the seminar were stated as follows:

"1. There is a need for improved communication among personnel in industry, labor, business, and education. Fulfillment of this need will require common definitions since effective communication presupposes at least minimum consensus on terminology.

"2. There is a need for the content of counselor education programs to be attentive to the wide range of functions counselors perform such as follow-up and placement as well as the consulting relationships in which they engage with teachers, parents and administrators.

"3. There is a need for personnel in education to make more effective use of the wide range of community resources available to them.

"4. There is a need for personnel in education to work more effectively with the decisionmakers both in and out of the school setting.

"5. There is a need to acquaint personnel in education more adequately with the wide range of available educational, training and occupational opportunities."

Ten months after the seminar, in the summer of 1967, a follow-up study was conducted to determine what, if any, projects, activities or services had resulted from the seminar. Eighty percent of the participating states responded, noting 215 specific outcomes of the seminar. From responses to the follow-up questionnaire, it was concluded that most participants felt a need for an ongoing series of seminars of the type of interaction which was fostered at the first seminar.

Development Workshop

Career Development Workshop, June 1-4, 1969. Final Report. E. G. Kennedy. State Department of Education, Topeka, Kans. 1969.

This workshop was the first of an anticipated annual series for assisting participants to fill the need for career development counseling of Kansas youth. The area of emphasis of the workshop was on career counseling of noncollege-bound students. Workshop proceedings included seven addresses on various aspects of career development and its problems.

Kenneth B. Hoyt, State University of Iowa, discussed "Career Counseling Today." In highlighting some of the crucial considerations which must be kept in mind while moving toward solutions to the problems of career counseling, Dr. Hoyt stressed three concerns: (a) implications of changes in society and the world of work upon the concept of counseling; (b) the role of education and training in career counseling, and (c) responsibilities in the "transition from school to work."

R. Wray Strowig, University of Wisconsin, presented a paper titled "Vocational and Technical Program Information for Use in Counseling High School Youth." While focusing upon guidance information regarding training programs in vocational schools, technical institutes and junior and community colleges, Dr. Strowig discussed the scope, purpose, need, and uses of this information.

After preparing participants with a background of the need for and analyses of vocational-technical information, areas where there is a need for research and developmental application of information about voca-

tional-technical curricula and institutions for guidance purposes were presented. Some of these pertain to the need for equal opportunities for women, the need for occupational adaptability, and the need for criteria and procedures to evaluate training information.

Francis A. Gregory, U.S. Department of Labor, Washington, D.C., presented a paper on "Organized Training Facilities Related Directly to Recent Federal Legislation—Including Apprenticeships." After "illuminating some of the unmet needs of youths and adults for which federal manpower programs have been attempting to supply compensatory services," Mr. Gregory reviewed some of the principal services that are available: USTES, Youth Opportunity Centers, Cooperative School Programs, MDTA Programs, Labor Mobility Demonstration Projects, Bonding Assistance, services for older workers, the New Careers program, apprenticeship training, outreach and information center programs, Job Corps, and Neighborhood Youth Corps.

In concluding, Mr. Gregory listed 11 insights which have been gained from experience in the manpower development effort, and which he feels have significance for public education:

1. Nearly all persons are trainable.
2. The motivational barrier can be cracked.
3. Rapid literacy training is possible as a part of job training.
4. The length of training should be varied according to individual needs.
5. An experience of success is essential.
6. Systematic linking of services is necessary.
7. Repeated job placement may be needed.
8. Post-placement support is often crucial.
9. Youth training requires special emphasis on supportive services.
10. Correction of health deficiencies is extremely important.
11. The ability to relate on the part of the instructor is of prime importance.

Harold Reed, U.S. Department of Labor, Washington, D.C., addressed the seminar on the topic of "The Employment Service as a Resource for Career Counseling." A review was made of some of the manpower programs and services, and a statement was made of the rationale for the programs and services which have a counseling component. The Human Resources Development Concept was illuminated, along with the HRD Employability Model and the Worker Incentive Program through which it works.

Frank F. Hoge, Vocational Rehabilitation, Topeka, Kan., discussed the "Division of Vocational Rehabilitation as a Resource for Career Counselors." After a description of the services of the Division, he stressed the need for cooperative efforts with other public and private sources.

Roy H. Johnson of the Kansas Chamber of Commerce, Topeka, presented an address, "Local Chambers of Commerce as a Resource for Counselors." Mr. Johnson pointed out services of the Chamber which can be valuable to the counselor: contact with the Chamber's education committee, and contact with local employers. Many attempts at setting up a flow of information and contact between school counselors and Chamber of Commerce members were outlined, and the hope was expressed that some such programs can be set up to remain operational. There is a need for someone to take the initiative in closing this communications gap—the desire for better communications in this valuable area is existent.

Dr. Strowig presented a final paper on "Counselor Attitudes and Career Counseling." Two propositions were discussed in the paper: (a) "that career or vocational counseling in schools is not as often or as well conducted nowadays as are other types of counseling" and (b) "that a number of counselor attitudes are not compatible with effective and sufficiently emphasized career counseling with adolescent youth in schools."

Suggestions for strategies for changing unfavorable attitudes toward career counseling were made. One of these was the use of a general model for "bringing about attitude change through the use of information media." Another was to bring about changes in attitude by "recognition and acceptance of feelings along with appeal to reason."

Comparative Guidance and Placement Program

Comparative Guidance and Placement Program: Interpretive Manual for Counselors, Administrators and Faculty. College Entrance Examination Board, Princeton, N.J. 1969.

This Interpretive Manual was prepared to provide descriptive information and statistical data which will help counselors, administrators and faculty in using the tests and services of the Comparative Guidance and Placement Program, a program for helping students entering two-year colleges to make sound educational and career decisions.

CGP tests focus on "experiences, interests and cognitive skills" of entering two-year college students. Experience from both academic and industrial situations was used in development of the CGP battery of operational and experimental tests. The operational tests are those which have been tested and found to be of use to counselors and students. Experimental tests are given in order to obtain information on the validity of the test itself, for possible inclusion in the battery of operational tests. The operational test battery was developed through field surveys which collected information about the particular needs of counseling for the two-year college student.

Among the CGP's operational tests are one for measurement of verbal skills and another for measurement of mathematical skills. In addition, a Letter Groups, or reasoning, test and a Year 2000, or integrative reasoning test, are included in the battery. Two other instruments, the Biographical Inventory and the Comparative Interest Index, measure experiences and interests rather than abilities.

The Interpretive Manual includes information on the meaning of results of CGP tests, both in statistical form and for use in individual counseling sessions. Another interpretive guide, written especially for students and entitled *Using Your CGP Report*, is mailed to each student along with his test scores.

See Bibliography for information on availability of complete studies

Student Selection and Prediction of Success

Review of Research on Student Selection and the Prediction of Success in Occupational Education. William E. Stock and Frank C. Pratzner. Minnesota Research Coordination Unit in Occupational Education, University of Minnesota, Minneapolis, Minn. August 1969.

In undertaking this project, a systematic search was made of research that has been conducted since 1960 related to selection of students and prediction of student success in occupational education. Although the review may not be all-inclusive, efforts were made to be thorough in the analysis.

An *Overview and Synthesis of Research* notes that "aptitude testing alone is not the whole answer to the student selection/prediction problem(s)." Study is needed also of non-intellectual factors, such as interest and motivation. A lack of material other than graduate dissertations is noted, and more systematic, longitudinal efforts are called for. Although the General Aptitude Test Battery is frequently cited as a very successful predictor of occupational interests, other tests should be investigated for greater value during different stages of personal and vocational development. Motor ability tests are seen to be of "negligible value in the selection-prediction process."

It is noted that "while many studies have successfully employed regressional techniques to identify selected variables for the prediction of variously defined training outcomes, few took the additional step of reporting (or perhaps the prior step of investigating) whether the regression equations and/or predictors identified through the regression equations were actually adopted and successfully utilized to effect student selection and guidance procedures or program changes." The importance of knowing whether use of data gained in studies makes a difference in outcomes such as reduced dropout rate or increased employment success is stressed.

The review is divided into three classifications: "achievement," "completion" and "student characteristics." The accompanying table depicts the number of predictive studies reported in the review for each student group according to these classifications.

Prediction of Achievement

The review notes that more effort has gone into research regarding achievement than in other areas. This fact is attributed to: (a) the ease in using available instruments for this purpose; (b) the shorter time period needed for this type of study, and (c) the clearly defined outcomes from this classification of research. The need for a programmatic approach to research in this area is noted. Various predictors of achievement are presented; among them are high school industrial arts scholastic achievement, academic variables, high school rank and grade point average, and, to a lesser extent, the American College Test.

Prediction of Completion

The difference between research studies predicting achievement and those predicting completion found by the review was that those predicting completion used non-intellectual variables in the predictor equations to a greater extent. The scarcity of studies in this area is mentioned, and findings of research on prediction of completion will need further validation through more research.

Among the predictors mentioned, however, were arithmetic achievement tests, the Differential Aptitude Test battery, intelligence scores, and ninth grade attendance and combined academic averages. In regard to success in two-year technical and associate degree college programs, the Minnesota Vocational Interest Inventory, "grade-expected-in-course," and student "motivation" were mentioned as important indicators. Studies of completion variables for adult vocational-technical students noted successful use of Employment Service test batteries and the General Aptitude Test Battery.

Prediction of Student Traits

As may be noted in the table, few studies of student-related characteristics were found for high school and post-high school groups, while more were available for adults. Also, no studies were found on prediction of achievement of adults. The reviewers feel that this is due to the fact that "reasons for selecting particular programs, and forms of desired training were more important variables for institutions than data predictive of achievement or program completion." Indicators of student characteristics mentioned by the review are the Minnesota Vocational Interest Inventory, Kuder Preference Record, Hackman-Gaither Vocational Interest Inventory, and the Strong Vocational Interest Blank.

Current research on student selection/prediction of success points out the need for improvement in current practices. Three approaches to the improvement of this process are described in the review. Among improvements of existing programs suggested by the review are use of "full-time certified counselors in each school . . . paraprofessional assistants . . . program coordination, long-range planning and graduate follow-up, and inservice staff training in . . . counseling." In addition, a "single selection, guidance and placement center for a state or region within a state" was outlined along with a "secondary school prevocational approach to selection and guidance."

		PROGRAM OUTCOMES		
		Achievement	Completion	Related Student Characteristics
Student Groups	High School	13	3	3
	Post-high School	25	12	3
	Adult	0	4	8
	Total	38	19	14

Guidance and Counseling Services

Review of Educational Research: Guidance and Counseling: Vol. 39, No. 2. American Educational Research Association, Washington, D.C. April 1969.

Because most studies in the areas of counseling, guidance and personnel services "fail to ask or explore questions that in any way alter theoretical rationales, programs or practices," this issue, which reviews studies in these areas, contains much critical comment on the status of research in various fields relating to counseling and guidance. Suggestions for further study are noted, and areas "in which further research would be futile" are identified.

Harry B. Gelatt of the Palo Alto Unified School District reviewed research in the area of School Guidance Programs. In reviewing and commenting upon recent developments in guidance research at the elementary and secondary school levels, Dr. Gelatt urges the development of "systematic conceptual frameworks for purposes, practices, functions, and the substance of *guidance in education.*" Noting that the past three years of research in this area were plagued by a lack of strongly stated objectives and a disagreement on the philosophy and basic objectives for guidance services, Dr. Gelatt sees a need for guidance services to become responsive to "theoretical principles, scientific investigations and changing needs."

In discussing the role and function of guidance, he mentions the 1965 study by Robert Clarke, Harry B. Gelatt and Louis Levine which presented a decision-making framework for guidance, and another study (1966) by Martin Katz, which builds a model for the guidance role and function. The comprehensive approach to guidance services is discussed, with mention of John C. Flanagan's 1967 study in which a program (PLAN: A Program for Learning in Accordance with Needs) for defining an individualized study program for each student is presented. The Tiedeman experiment at Harvard (see *RV, October 1969*) and several assessment studies which examine elementary and secondary school programs are mentioned.

In reviewing research of the counselor as a researcher, Dr. Gelatt notes four points which are generally emphasized:

"1. A framework for the provision and evaluation of guidance services is desirable.

"2. The goals and specific objectives of guidance services need to be explicitly stated.

"3. The question of values cannot be ignored.

"4. Research that is undertaken must be locally meaningful and related to procedures used and objectives sought."

Dr. Gelatt feels that any separation between elementary and secondary school guidance programs should be de-emphasized, and he reviews a great deal of research relating to guidance programs.

A review of research relating to career development is presented by John L. Holland and Douglas R. Whitney of the American College Testing Program. In surveying the field of theory and speculation on career development, the authors denote as the most comprehensive work that which was done by John O. Crites in 1968. The text, *Vocational Psychology,* "deals with vocational choice, adjustment, success, theory, satisfaction, etc."

A decreasing rate of literature on vocational images, preferences and influences was noted by the authors in the past three years (the period of work covered by this issue). This was also true of the amount of literature to be found on occupational classification, although it was felt that the available material was very promising.

Longitudinal studies, both theoretical studies and surveys, were explored by the authors. In making an evaluation of the research in the field of career development for the years 1965-1968, the authors note a rapid growth in the amount of research, but not very much significant information coming out of this research. It was also noted that more integration of current knowledge is needed.

William W. Cooley and Raymond C. Hummel of the University of Pittsburgh reviewed research regarding systems approaches in guidance. Three projects were reviewed in length: the Systems Development Corporation Vocational Counseling System: Autocon, the Tiedeman "Information System for Vocational Decisions" (*see RV, October 1969*), and the IBM Guidance Counseling Support System. Noting that these projects do not represent the full potential of this means of guidance, the authors cite a 1968 study by William W. Cooley which argues that "guidance systems should be considered as part of the total educational system."

While looking with enthusiasm on the new vistas opened by the systems approach, the authors offer a few words of caution. In regard to the problems of the systems approach contradicting the philosophy of personal contact in guidance situations, the authors feel that actually, the systems approach will not become a substitute for personal contact, but will permit more individualized information-seeking and decision-making to go on, thus leaving more time for the student and the counselor to interpret the information on a personal basis.

The second area in which to exercise caution, according to the reviewers, is that of underestimating the amount of time needed in the systems development effort. Those who are working in the field, and those from whom funding is received, must understand that the road ahead is very long.

Other subject areas covered in this issue of *Review of Educational Research* are "Theoretical Foundations of Guidance" by Martin R. Katz; "Higher Education Programs and Student Development" by Harold A. Korn; "Counselor Education" by John M. Whiteley, "Changes Through Counseling" by Ray E. Hosford and Alan S. Briskin; "Group Counseling" by Alan R. Anderson; "Counseling Students with Special Problems" by D. David Island, and "Relevance and Research in Counseling" by Carl E. Thorensen.

JANUARY ISSUE . . . *Research Visibility* will begin the new year by reporting on studies dealing with "curriculum." The studies will cover various programs in vocational, technical and practical arts education.

Socioeconomic Profile

Socioeconomic Profile of Credit Students in the North Carolina Community College System. Gerald M. Bolick. North Carolina Department of Community Colleges, Raleigh, N.C. July 1969.

A comprehensive community college system has been established in North Carolina. In order that administrators, instructors and the community might have information regarding the social and economic characteristics of students in these colleges for effective programing and planning, a socioeconomic data sheet was filled out by 11,184 students enrolled in 42 community colleges and technical institutes. Questions regarding family income, parents' education, high school curriculum, plans for the future, and distance to class were asked.

Results of the questionnaire evidenced a varied social and economic background among North Carolina's students. Ages ranged from 17 to more than 50 years; parents' incomes varied from $5,000 or more for over half of the students to $10,000 and over for one-sixth of the students. While 92 percent of the students have completed the twelfth grade, only 35 percent of their fathers and 46 percent of their mothers had done so. More than half of the students were employed at least part-time, with 40 percent of the trade and industrial students being employed full-time. Males outnumber females in the system two-to-one, and 27 percent of the technical and 16 percent of the vocational students plan to work toward a four-year degree.

The value of the community college system to the State is evidenced through figures obtained in the study. One-third of the responding students said that they would not have attended school that year if the school they were attending had not existed, and three-fourths of the students plan to seek employment in North Carolina when they have completed their studies.

Areas which showed need for improvement were educational opportunities for women, lower socioeconomic groups, evening students and those over 25 years of age, and nonwhites. Coordination and articulation of the various levels of instruction in the State, from high school to senior colleges, would provide a more complete program.

Specifically, the study sought to establish socioeconomic profiles for the entire North Carolina Community College System, each of the three program areas which offer credit, and each of seven curriculums in the occupational programs. A comparison was also made between North Carolina students with their counterparts in other states. Finally, data were collected as a basis for follow-up studies of the effect of student characteristics on the drop-out rate, grades, employment opportunities, and employment success.

The typical technical student in a community college in North Carolina was found to be a white, unmarried male of 18 to 22 years of age. He does not plan to work for a four-year degree, and he plans to work in the State after graduation from his technical course.

The same is true of the typical vocational student. His family's income is typically lower than that of the technical student ($4000 or more annually compared with $5000 or more), and he generally works more hours per week than does the technical student. Characteristics of students and typical students for each of the seven occupational curriculums (agriculture, distribution, engineering, health, home economics, office, and trade and industry) are described.

Nonprofessional Women

Vocational Interests of Nonprofessional Women. David P. Campbell, University of Minnesota, Minneapolis, and Lenore W. Harmon, University of Wisconsin, Madison. Dec. 1968.

The average working woman of today is 41 years old, married, and she has approximately 20 years of employment ahead of her. It is becoming increasingly important, therefore, to provide effective vocational counseling for women who plan to enter the labor market without college preparation.

The purpose of this project was to study the vocational interests of women in nonprofessional occupations in order to gather information on the patterns of their interests. A study of this nature could assist counselors of women to compare the interests of those who are making vocational choices with the interests of women who are presently working.

The Strong Vocational Interest Blank was administered to 5,583 women in 17 occupations which require either no post-high school training or some noncollegiate training, such as beautician training. In addition, information was collected regarding the age and educational attainment of the respondents and their perception of their jobs. Through these instruments the study attempted to determine whether or not vocational choice of women was dictated by different interest patterns or solely by economic and convenience factors. Assuming that choice is the result of interest patterns, an attempt was made to describe and quantify the patterns.

Only questionnaires of women who replied that they enjoyed their jobs and had been employed in their present one for at least three years were scored for purposes of the study. Educational levels of the sample varied from less than high school to college. A questionnaire listing adjective pairs regarding work, such as "dangerous/safe" and "artistic/not artistic," was used to investigate the respondents' perception of their jobs.

The questionnaire was scored separately for each occupation studied, and results are included in the report in chapters dealing with each occupation as well as in a scale including all occupations. For example, the women generally described their iobs as nonscientific, although radiologic technicians and elementary teachers described themselves as scientists more often than other occupational groups.

Responses to the Strong Vocational Interest Blank were scored for

each occupation, and a scale was set up for each occupation. The scale designated the areas in which women in that occupation expressed a stronger interest than "women in general" (including professional and semi-skilled women.) The scales do reflect meaningful differences in interests between women in the various occupations, and it was recommended that these scales be used in counseling noncollege women in occupational possibilities fitted to their SVIB-identified interests.

A set of Basic Interest Scales was developed. Nineteen of these scales (topics such as homemaking, sports, mechanical, and religious activities) were set up with each occupation being placed on its own level of interest in that area. For example, on the homemaking scale, executive housekeepers, telephone operators and sewing machine operators scored relatively high, while mathematicians, artists and enlisted Army personnel scored much lower. These scales were developed to indicate the interests which characterize women in a certain occupation.

The study concludes with the two-fold observation that it was unable to measure intra-occupational differences which admittedly exist; the study did not determine how the differences between occupations are initially formed. There is also a gap in formalizing the structure of vocational interests. It is recommended that continued investigation of nonprofessional women be made to avoid future turmoil in these occupations.

Techniques Applied to Maladjusted Under-Achievers

The Application of a Special Counseling Technique to Maladjusted Under-Achievers: A Pilot Project. Leland J. Winger. Salt Lake City School District, Salt Lake City, Utah. August 1968.

This study was conducted as a test of the Otto Self-Concept Improvement Counseling Technique (OSCICT) on maladjusted underachievers (dropouts). It was designed to measure the improvement of the dropouts' self-concepts, scholastic abilities and achievements through use of various testing instruments. A follow-up study for the purpose of measuring the employability of the participants was made six months after the initial program.

The OSCICT is a technique developed by Herbert A. Otto, associate professor, University of Utah, to help an individual realize his total potentialities through emphasis of his personality strengths. Although the OSCICT had been previously successfully tested on healthy subjects, the need for it to be tested on less healthy individuals was realized.

The theory upon which Dr. Otto bases his technique is that in order to succeed in learning an occupation, holding a job, and participating as a productive citizen the dropout must change his behavior and outlook, accept a new image of himself and develop an improved self-concept. He feels that this change must be effected through existing school situations with the help of understanding teachers, counselors, principals, and administrators.

Three groups of students selected from MDTA youth projects were the subjects of the study. Two groups were taken from the Salt Lake City School District—one experimental and one control group. Another control group was then selected from the Ogden School District. Students in the Salt Lake City groups were divided into eight homerooms, four of which would receive the OSCICT and four of which would not. The groups would spend one hour each day in homeroom classes, at which time the four OSCICT groups would receive OSCICT assignments and the other groups would receive the traditional homeroom program.

Pretests and post-tests were used in evaluation of the program. These tests included the California "F" Scale, the Winger Behavior Inventory, the Mooney Problem Checklist, the verbal and non-verbal forms of the Lorge-Thorndike, and sections of the Iowa Test of Educational Development. In the pretest phase, some testing was done verbally because of illiteracy of some students.

OSCICT consists of five major components: the Multiple Strength Perception Method, Action Programs, Your Strengths forms, Strength Role Assignment, and the Minerva Experience. These techniques are employed with the groups only after they (a) "have developed a considerable degree of interpersonal closeness," (b) "are able to communicate spontaneously and freely about their real concerns," (c) "are able to share the depth of their feelings," and (d) "can use confrontation productively."

The Multiple Strength Perception Method is a group participation technique in which, after a randomly selected "target person" has listed for the group what he perceives as his strengths, the group "bombards" the target person with what it perceives as his strengths and factors which keep him from utilizing these strengths. After this "bombardment" the group shares in a fantasy about what the target person might be like five years later if he were to use all of his strengths.

The Minerva Experience technique is based on group relating of experiences. Minerva Experiences are defined as "a network of highly formative and growthful experiences having strongly positive affective components and which play a dominant role in the genesis of personality resources thus significantly affecting personality development."

Group members are asked, as an interim assignment, to attempt to recall such experiences in their own lives. In the next session, with the use of a chart which lists age groups starting with "age 15 to 18" and ending at "below 3 years," the participants begin recalling aloud Minerva experiences which they had in the various age categories. Oftentimes the experience which one group member is relating triggers recall of an experience for another group member.

As in the Multiple Strength Perception Method, the Assigned Strength Roles technique has the group working with a randomly selected target person. In this case, however, the group offers suggestions of roles which members feel would strengthen or help mobilize the potentialities of the target person. Finally, a strength role is assigned by the group for the person, and he attempts to carry out behavior associated with that role for approximately one week.

At the end of the period, he describes to the group his experiences in his strength role, and also any changes he has noted in himself or persons associated with him due to his strength role behavior. It has been found that this method has been valuable in developing latent abilities and capacities in the individual, and that behavior carried out during the period of assignment is often continued beyond that period.

Action Programs are defined as "any activity, program or interpersonal experience in which the participant engages outside the counseling setting in order to facilitate the development of strengths or the utilization of his potential." Members of the group choose action programs for themselves. These programs should be of a short duration, perhaps three to seven days in length, and should start with easier acts, such as a grooming improvement, and may progress to more complex acts, such as building a new friendship.

Success or failure in the action program is reported back to the group, and failures are examined by the group in order to determine the obstacles to their success and ways to remove them. The action program technique is unique in that it extends therapy outside the counseling session into the process of living.

The "These Are Your Strengths Forms" technique is designed to provide the target person with "a series of positive, ego-supportive experiences." Members of the group fill out forms on which they list strengths that they perceive in a target person. A discussion session follows in which participants may clarify rationale for their lists, and amplify their decisions.

Results of pretests and post-tests were less conclusive than it was hoped for at the outset of the study, due to the fact that the experimental and control groups had significant age and achievement differences as indicated by the pretests. Therefore, comparison of the experimental group with the control groups was virtually meaningless; comparison of experimental group pre- and post-test scores was, however, possible.

Comparison of this nature was made difficult because of the differences between male and female members of the experimental group. Female participants were initially less deviant in personality traits, better academically prepared, younger, and had more academic potential than the male members. Despite these difficulties, improvement on all but the Lorge-Thorndike post-test was evident for the experimental group as a total.

The investigator concluded that the OSCICT was an effective method for improving personality deficiencies in maladjusted underachievers, but that it should be tested further in another project in which enrollees would have more time to actually demonstrate academic achievement.

Career Thresholds

Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth 14-24 Years of Age, Volume One. Herbert S. Parnes, et al. Center for Human Resource Research, The Ohio State University, Columbus, Ohio. February 1969.

This study is the report of the first of six planned interviews with a sample of men who were between the ages of 14 and 24 as of April 1966. The studies are being conducted by the Center for Human Resources Research at The Ohio State University under a contract with the U.S. Department of Labor, and are conducted in conjunction with studies of other age and sex groups: men aged 45-59, women aged 30-44, and young women aged 14-24. These four groups were selected for study because of the special labor market problems which confront them. The study reported here (young men) was conducted in 1966. It concerns problems of occupational choice: preparation for the world of work, and accommodation to it.

The report has taken a look at "labor force participation, unemployment experience, employment patterns, labor market knowledge, job attitudes, and educational and occupational aspirations of the age cohort as of the time of the initial survey" and has sought explanations for variations according to economic, social and psychological differences between the young men.

The total study aims to identify labor market problems of young men, identify the sources of these problems, and perhaps suggest remedial policy measures. Specifically, the study seeks to determine how the "interaction among economic, sociological, and psychological characteristics . . . permits some members of a given socioeconomic group to make good job choices and to adjust satisfactorily to labor market conditions while others do not."

Major dependent variables of the study were labor force participation, unemployment, mobility, job attitudes, knowledge of the labor market, and educational and occupational aspirations. In most cases, comparison is made on the basis of color. Other variables such as formative influences, marital and family characteristics, financial characteristics, skills, health and physical condition, school experience, work attitudes, and environment were also treated.

In a survey of demographic and social characteristics, it was determined that "there are very dramatic differences between white and black youth with respect to a large number of socioeconomic variables that may be expected to have profound effects on labor market experience and behavior." For example, it was noted that as a result of family background and socioeconomic status, along with the factor of where the youth lives (rural area, suburb, large city), that black youth are less likely to be enrolled in school than white youth. Also, blacks are less likely than whites to be enrolled in college preparatory curriculums or to have received vocational training outside of the formal educational system. (See *table on page* 53.)

Investigation of labor force and employment status of young men reveals that labor force participation within age and school status categories is related to a number of factors: high school curriculum and educational aspirations, marital status, health condition, and local labor market conditions. The most powerful of these was found to be whether or not the individual is enrolled in school.

In order to measure the amount of knowledge of the world of work, an occupational information test was administered. The test consisted of three components: (a) an occupational identification instrument in

which respondents were asked to select one of three statements which best describes duties of each of ten occupations; (b) an estimate of educational attainment of the average worker in each of the occupations, and (c) an estimate of which worker of a given pair earns a higher average yearly salary.

Results of the testing indicated that "the amount of occupational information a young man possesses grows very substantially from his early teens to his early twenties, in part as the result of formal education, but also simply as the result of experience." Other variables which produced differences in amount of occupational information possessed include the character of family life (father's occupation and amount of reading material in the home) and color differences.

It was suggested that an effort should be made to familiarize students with the world of work at an early age, so that basic decisions as to courses of instruction to follow may be made rationally. Data suggest that higher levels of labor market information pay off in better jobs and higher wages.

A survey of educational and occupational aspirations of young men brings out the fact that the 14 to 17 year age group who are enrolled in school have very high aspirations which include college and professional or technical careers for the majority. However, their *hopes* are much higher than their surveyed *expectations* are.

School Enrollment Status, by Age and High School Curriculum: Males 16-24 Years of Age With Some High School, by Color
(Percentage distribution)

Age and school enrollment status	WHITES					BLACKS				
	Vocational	Commercial	College preparatory	General	Total or average	Vocational	Commercial	College preparatory	General	Total or average
16-17										
Enrolled	82	93	96	81	87	77	90	89	79	81
Not enrolled	18	7	4	19	13	23	10	11	21	19
Total percent	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	347	68	1,251	1,239	2,960	65	21	98	270	461
18-19										
Enrolled	30	35	82	42	60	37	50	78	29	43
Not enrolled	70	65	18	58	40	63	50	22	71	57
Total percent	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	213	80	1,202	1,019	2,592	39	13	66	158	288
20-24										
Enrolled	8	8	51	19	30	16	0	40	11	16
Not enrolled	92	92	49	31	70	84	100	60	89	84
Total percent	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	363	149	1,717	2,330	4,627	69	15	104	368	575
Total 16-24										
Enrolled	41	35	73	41	54	43	51	67	38	45
Not enrolled	59	65	27	59	46	57	49	33	62	55
Total percent	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	924	298	4,170	4,589	10,177	171	49	268	796	1,324

plain talk

George L. Brandon, Editor, Research Visibility

A NEW LOOK—A NEW PRESCRIPTION. *Research Visibility*, after the current run ending with the May 1970 issue is likely to have more than minor facial surgery for, optimistically, the years ahead. *RV*'s Advisory Committee (membership listed in September 1969 issue), while generally pleased with progress and impact, had violence in its heart as it examined the *RV* role of the future. Undoubtedly, the Committee's recommendations will have considerable clout with the *RV* staff and with AVA and the U.S. Office of Education, the sponsoring agents.

The September meeting of the Committee advocated the following changes in the content and procedure of the research reporting for a new functional *RV*:

1. The target group should principally be the teacher readership.

2. Research reporting should concentrate on strong pre-selection, synthesis, brief treatment, problem-centered research.

3. The synthesis should point up alternatives for action and general, creditable outcomes as they seem to be indicated by research.

4. The synthesis-application-dissemination theme of the past should be retained through construction and use of a model with a built-in self-correction technique for accountability and adjustment as the new series unfolds.

5. Continued survey of the readership should be conducted for determination of current impact and clarification for the future.

The new prescription, among many things, will require quick and drastic action on a new design; strategic timing to permit continued publication in the JOURNAL for 1970-71; careful examination of resources to review literature and synthesize desirable applications, and close coordination with AVA research mission and new role of research activity in the U.S. Office of Education. The new prospectus is not necessarily complex; quite to the contrary, the prescription attempts to simplify for an obvious pupose:

A new movement is gaining momentum throughout the realm of education today. It is a movement toward perspective and synthesis, relevance and involvement, sensing and feeling, empathy and respect, wonder and adventure, and toward versatility and universality. Above all else it is a movement leading toward *simplicity* throughout the realms of education and research. (Jere W. Clark in *Systems Education Patterns on the Drawing Boards for the Future.* Center for Interdisciplinary Creativity. Society for General Systems Research, Washington, D. C. *Italics in the original.*)

More duplication in the training marketplace. It is the gross understatement of the year to assert that legislative support for occupational guidance and counseling is duplicated in the Vocational Education Amendments of 1968 and the deluge of manpower legislation. Impartial proponents of a guidance delivery system would argue that this condition is good—if a little guidance is good, is not much more of the process better?

If, however, provisions of the manpower legislation run true to form, professional guidance and counseling personnel in the schools may find themselves on the outside looking in. Vocational guidance, not unlike vocational education itself, is switching to one of the dual tracks being assigned to the American school. Perhaps the dual tracks have always existed for those of vocational or practical bent whose aptitudes and nature of intelligence never stacked up academically.

One has the uneasy feeling that a great segment of educators would abdicate the guidance and counseling function—particularly that aspect which is related to occupations—and together with vocational education delegate the unsavory process to an agency of government whose province and expertise are clearly not education. Obviously our proneness to adopt European organization and practice did not end in the nineteenth century; in fact, the proneness does little justice to the best in modern European thought and educational practice.

To quote a popular vernacular, education including vocational education must *get with it.* "Getting with it" means going on the offensive to eliminate any dual track system in American education regardless of the enchantment embodied in the consolidation and centralization of administrative responsibility. In reality the "getting with it" process may be too little, too late; American education, particularly that aspect of it which is vocational and occupational, has already gravitated to a *multiple* track since at least the advent of MDTA and 1962.

When it comes to the complete integration of vocational education into the total fabric of the American school, there is no escaping the impression that vocational education is becoming everybody's business—but it is always for the other person, or his children. For decades vocationalists have been accused of being highly sensitive and defensive of their programs in the schools of the nation. Who knows, perhaps the sensitivity and the defensive spirit may be the only saving grace remaining to keep American schools American.

High cost of intellectual snobbery. Current market price is $14 to $1 over the Federal counter. For every $1 spent on vocational education, $14 go for the Nation's universities. This recent price quotation is one of the facts published in the *Annual Report of the National Advisory Council on Vocational Education.* The total report is only four pages long, perhaps a new record for an auspicious national body whose commission embraces the new role of vocational education. At least, the four pages have a lot of vitality and revelation—both will be needed in the days ahead!

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New Careers Research

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"Why and How Young Men Drop Out of High School: Some Preliminary Findings, Working Paper No. 4, Interim Report." Ilona D. Wirtanen. University of Michigan, Institute for Social Research, Ann Arbor, Mich. February 1969, 43 pages. (CFSTI # PB 183 784.)

"The Rehabilitation of School Dropouts in Oklahoma City: An Experimental Appraisal. Final Report." Victor O. Hornbostel, et al. Oklahoma State University, Stillwater, Okla. 196 pages. (ERIC # ED 021 979. HC: $7.92, MF: 75¢.)

DOCUMENT SOURCES

The material reported on in *Research Visibility* may be obtained from several sources. The source of each publication is indicated in each entry. The key to the abbreviations used there and instructions for obtaining the publications are given below:

CFSTI—Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151. Copies of reports with this symbol may be purchased for $3 each (paper) or 65 cents (microfiche). Send remittance with order directly to the Clearinghouse and specify the accession number (AD or PB plus a 6-digit number) given in the listing.

ERIC—Educational Resources Information Center, EDRS, c/o NCR Co., 4936 Fairmont Ave., Bethesda, Maryland 20014. Copies are priced according to the number of pages. The MF price in the listing is for microfiche; the HC price is for paper copies. Send remittance with order directly to ERIC-EDRS and specify the accession number (ED plus a 6-digit number) given in the listing. *How to Use ERIC*, a recent brochure prepared by the Office of Education, is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402; the catalog number is FA 5.212: 12037-A; price: 30 cents.

GPO—Government Printing Office. Send orders directly to Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402, with remittance for specified amount.

MA—Manpower Administration. Single copies free upon request to U.S. Department of Labor, Manpower Administration, Associate Manpower Administrator, Washington, D. C. 20210.

OTHER SOURCES—Where indicated the publication may be obtained directly from the publisher at the listed price.

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